

Applicant : So et al.  
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Attorney's Docket No.: 12406-161001 / P2003,0944 US E

## REMARKS

### I. Introduction

For the reasons set forth below, Applicant respectfully submits that all pending claims are patentable over the cited prior art references.

### II. The Rejection Of Claims 1-6, 10 and 26-30 Under 35 U.S.C. § 102

Claims 1-6, 10 and 26-30 are rejected under 35 U.S.C. § 102(e) as being anticipated by USP No. 6, 815,505 to Wu. Applicant respectfully traverses this rejection for at least the following reasons.

Claim 1 recites in-part an emissive layer having two end groups, wherein one end group is coupled to one end of a portion of a particular polymer chain and the other end group is coupled to an opposite end of the portion of the particular polymer chain, and only the two end groups emit visible light. In other words, claim 1 requires that only the two end groups located at opposite end of the polymer chain emit visible light.

In the statement of rejection, the Examiner asserts that the host polymer block of Wu contains the structure recited in claim 1. Applicant respectfully disagrees.

Specifically, Wu discloses an organic block polymer including an emissive polymer block, a positive charge carrier polymer block, a negative charge carrier block and a host polymer block (col. 2, line 65-col. 3, line 22), each of which includes monomers. Wu also discloses that these blocks may be assembled by first forming one block, then adding monomers for the second block to the reaction mixture, followed by sequential addition of monomers for additional blocks (col. 7, lines 58-61). Alternatively, each block may first be assembled separately and then reacted with other blocks prepared in the same manner to form the desired block polymer with two or more distinct block regions (col. 7, lines 62-65).

However, Wu does not disclose or suggest that the monomers of the emissive polymer block are placed at opposite end of the organic block polymer chain. Indeed, as readily shown in Wu's examples (e.g., example 1), the polymer blocks of Wu are polymerized in such a way that

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the emissive polymer blocks are arranged between the positive charge carrier blocks, and are not positioned at opposite ends of the polymer chain defining the organic block polymer.

Furthermore, other examples of Wu (e.g., comparative example 1) describe randomly polymerized copolymers. However, it should be noted that a randomized polymerization of a mixture of various light emissive, electron transporting and hole transporting monomers would not arrive at a randomized copolymer with only the end groups being light emissive. In this respect, Applicant would stress that inherency "may not be established by probabilities or possibilities". The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*; *In re Rijckaert*; *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991); *In re Oelrich*, 666 F.2d 578, 212 USPQ 323 (CCPA 1981).

If the pending rejection is maintained, Applicant respectfully request that the next Office Action expressly identify (or otherwise provide technical publication or other factual evidence) how the emissive polymer blocks of Wu are arranged at opposite ends of a polymer chain, how the alleged end groups of the emissive polymer blocks are positioned at these opposite ends of the polymer chain, and how the alleged end groups of the emissive polymer blocks are determined to be light emissive.

#### Claim 26

Claim 26 recites in-part two end groups, wherein one of the two end groups is coupled to one end of the portion of the particular polymer chain and another one of the two end groups is coupled to an opposite end of the portion of said particular polymer chain, and wherein only the plurality of end groups emit visible light. For analogous reasons discussed above, Applicant respectfully submits that claim 26 is also allowable over Wu.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently, in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), and because Wu does not disclose or

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suggest, *inter alia*, "two end groups, wherein one of the two end groups is coupled to one end of the portion of the particular polymer chain and another one of the two end groups is coupled to an opposite end of the portion of the particular polymer chain, and wherein only the two end groups emit visible light", it is submitted that Wu does not anticipate claim 1 or claim 26, or any claim dependent thereon.

**III. All Dependent Claims Are Allowable Because The Independent Claims From Which They Depend Are Allowable**

Under Federal Circuit guidelines, a dependent claim is neither anticipated nor rendered obvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claims 1 and 26 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also in condition for allowance.

**IV. Conclusion**

By responding in the foregoing remarks only to particular positions taken by the Examiner, the Applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, Applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

For all of the reasons set forth above, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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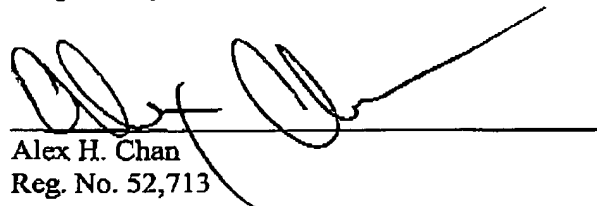
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including extension of time fees, to Deposit Account 06-1050 and please credit any excess fees to such deposit account.

Respectfully submitted,

Date: \_\_\_\_\_

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